



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2013-0024; Product Identifier 2000-NE-12-AD]

RIN 2120-AA64

Airworthiness Directives; Safran Helicopter Engines, S.A., Turboshift Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to supersede airworthiness directive (AD) 2013-11-09 that applies to all Safran Helicopter Engines, S.A., Arrius 2B1 and 2F turboshaft engines.

Depending on the engine model, AD 2013-11-09 requires the repetitive replacement of the fuel injector manifolds and privilege injector, or only the privilege injector. Since we issued AD 2013-11-09, we received reports of engine flameouts as a result of reduced fuel flow due to the presence of coking. This proposed AD would retain the repetitive hardware replacement requirements of AD 2013-11-09, but only allow replacement pipe injector preferred assembly, part number (P/N) 0 319 73 044 0, on the Arrius 2F engines.

We are proposing this AD to correct the unsafe condition on these products.

DATES: We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.

- Fax: 202-493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact Safran Helicopter Engines, S.A., 40220 Tarnos, France; phone: (33) 05 59 74 40 00; fax: (33) 05 59 74 45 15. You may view this service information at the FAA, Engine and Propeller Standards Branch, Policy and Innovation Division, 1200 District Avenue, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2013-0024; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the mandatory continuing airworthiness information, regulatory evaluation, any comments received, and other information. The address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Robert Green, Aerospace Engineer, FAA, ECO Branch, Compliance and Airworthiness Division, 1200 District Avenue,

Burlington, MA 01803; phone: 781-238-7754; fax: 781-238-7199; email:
robert.green@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2013-0024; Product Identifier 2000-NE-12-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

On May 23, 2013, we issued AD 2013-11-09, Amendment 39-17469 (78 FR 32551, May 31, 2013), “AD 2013-11-09” for all Turbomeca S.A. Arrius 2B, 2B1, and 2F turboshaft engines. Depending on the engine model, AD 2013-11-09 requires the repetitive replacement of the fuel injector manifolds and privilege injector, or only the privilege injector. AD 2013-11-09 resulted from a report that the corrective actions of AD 2001-08-14, R1, Amendment 39-14423 (71 FR 2993, January 19, 2006) were insufficient

to eliminate the unsafe condition. We issued AD 2013-11-09 to prevent an engine flameout of Arrius 2B1 and 2F turboshaft engines and damage to the helicopter.

Actions Since AD 2013-11-09 Was Issued

Since we issued AD 2013-11-09, we received reports of engine flameouts as a result of reduced fuel flow due to the presence of coking. Also since we issued AD 2013-11-09, the European Aviation Safety Agency (EASA) has issued AD 2017-0070, dated April 25, 2017, which requires replacement of pipe injector preferred assemblies, P/N 0 319 73 835 0, with improved assembly, P/N 0 319 73 044 0, on Arrius 2F engines.

Related Service Information

We reviewed Safran Helicopter Engines, S.A., Service Bulletin (SB) No. 319 73 4839, Version A, dated December 13, 2016. The SB describes procedures for replacing pipe injector preferred assemblies.

FAA's Determination

We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

Proposed AD Requirements

This proposed AD would require, for Arrius 2B1 turboshaft engines, initial and repetitive replacement of the main fuel injector half-manifolds and preferred injector with a part eligible for installation within the compliance times specified. This proposed AD would also require, for Arrius 2F turboshaft engines, initial and repetitive replacement of the preferred injector and replacing pipe injector preferred assemblies, P/N 0 319 73 835 0, with assembly, P/N 0 319 73 044 0.

Costs of Compliance

We estimate that this proposed AD affects 50 Arrius 2B1 and 105 Arrius 2F turboshaft engines installed on helicopters of U.S. registry.

We estimate the following costs to comply with this proposed AD:

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Arrius 2B1 fuel injector manifolds and injector replacement	3 work-hours X \$85 per hour = \$255	\$0	\$255	\$12,750
Arrius 2F pipe injector preferred assembly replacement	3 work-hours X \$85 per hour = \$255	\$3,154	\$3,409	\$357,945

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

This AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to engines, propellers, and associated appliances to the Manager, Engine and Propeller Standards Branch, Policy and Innovation Division.

Regulatory Findings

We have determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that the proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:
Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by removing airworthiness directive (AD) 2013-11-09, Amendment 39-17469 (78 FR 32551, May 31, 2013), and adding the following new AD:

Safran Helicopter Engines, S.A. (Type Certificate previously held by Turbomeca S.A): Docket No. FAA-2013-0024; Product Identifier 2000-NE-12-AD.

(a) Comments Due Date

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD supersedes AD 2013-11-09, Amendment 39-17469 (78 FR 32551, May 31, 2013).

(c) Applicability

This AD applies to all Turbomeca S.A. Arrius 2B1 and 2F turboshaft engines.

(d) Subject

Joint Aircraft System Component (JASC) Code 7320, Fuel Controlling System.

(e) Unsafe Condition

This AD was prompted by several reports of engine flameouts as a result of reduced fuel flow due to the presence of coking. We are issuing this AD to prevent an engine flameout of Arrius 2B1 and 2F turboshaft engines and damage to the helicopter.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

(1) For Arrius 2B1 turboshaft engines, do the following:

(i) Replace each main fuel injector half-manifold and preferred injector with a part eligible for installation before exceeding the operating hours (hours accumulated by the part since installation on an engine) specified in Figure 1 to paragraph (g) of this AD.

Figure 1 to paragraph (g) – Replacement

Part	Operating hours
Main fuel injector half-manifold – post-mod TU117	600
Main fuel injector half-manifold – pre-mod TU117	200
Preferred injector pre/post-mod TU117	200

(ii) Borescope-inspect (BSI) the flame tube and the high-pressure turbine (HPT) area for turbine distress, when replacing the fuel injector manifolds and preferred injector for the first time.

(iii) Thereafter, replace the fuel injector manifolds and preferred injector with a part eligible for installation before exceeding the operating hours (hours accumulated by the part since installation on an engine) specified in Figure 1 to paragraph (g) of this AD.

(2) For Arrius 2F turboshaft engines, do the following:

(i) Replace each pipe injector preferred assembly, part number (P/N) 0 319 73 835 0 and P/N 0 319 73 044 0, with a part eligible for installation before exceeding 400 operating hours (hours accumulated by the part since installation on an engine).

(ii) BSI the flame tube and the HPT area for turbine distress, when replacing the privilege injector for the first time.

(iii) Unless already accomplished as required by paragraph (g)(2)(i) of this AD, within 16 months after the effective date of this AD, replace the pipe injector preferred assembly, P/N 0 319 73 835 0, with a part eligible for installation before the next flight.

(iv) Thereafter, replace the pipe injector preferred assembly with a part eligible for installation within 400 operating hours since the last pipe injector preferred assembly replacement.

(h) Definitions

(1) For Arrius 2B1 turboshaft engines, a main fuel injector half-manifold or preferred injector is eligible for installation if it has not exceeded the operating hours specified in Figure 1 to paragraph (g) of this AD since first installation on an engine or since last cleaning.

(2) For Arrius 2F turboshaft engines, a pipe injector preferred assembly, P/N 0 319 73 044 0, is eligible for installation if it has not exceeded 400 operating hours since first installation on an engine or since last cleaning.

(i) Installation Prohibition

(1) For Arrius 2B1 turboshaft engines, after the effective date of this AD, do not install a main fuel injector half-manifold or preferred injector onto any engine, or any engine onto a helicopter, unless the main fuel injector half-manifold and preferred injector are eligible for installation.

(2) For Arrius 2F turboshaft engines, after the effective date of this AD, do not install a pipe injector preferred assembly onto any engine, or any engine onto a helicopter, unless the pipe injector preferred assembly is eligible for installation.

(3) For Arrius 2F turboshaft engines, after the effective date of this AD, do not install a pipe injector preferred assembly, P/N 0 319 73 835 0, onto any engine.

(j) Alternative Methods of Compliance (AMOCs)

(1) The Manager, FAA, ECO Branch, Compliance and Airworthiness Division, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ECO Branch, send it to the attention of the person identified in paragraph (k)(1) of this AD. You may email your request to: ANE-AD-AMOC@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(k) Related Information

(1) For more information about this AD, contact Robert Green, Aerospace Engineer, FAA, ECO Branch, Compliance and Airworthiness Division, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7754; fax: 781-238-7199; email: robert.green@faa.gov.

(2) Refer to MCAI European Aviation Safety Agency (EASA) AD 2017-0070, dated April 25, 2017, for more information. You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating it in Docket No. FAA-2013-0024.

(3) Safran Helicopter Engines S.A., SB No. 319 73 4839, Version A, dated December 13, 2016, can be obtained from Safran Helicopter Engines S.A., using the contact information in paragraph (k)(4) of this AD.

(4) For service information identified in this AD, contact Safran Helicopter Engines, S.A., 40220 Tarnos, France; phone: (33) 05 59 74 40 00; fax: (33) 05 59 74 45 15.

(5) You may view this service information at the FAA, Engine and Propeller Standards Branch, Policy and Innovation Division, 1200 District Avenue, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125. Issued in Burlington, Massachusetts, on August 18, 2017.

Robert J. Ganley,
Manager, Engine and Propeller Standards Branch,
Aircraft Certification Service.
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